

IN THE CLAIMS:

1. (Previously Presented) A nonvolatile memory comprising:
a memory cell array including a plurality of memory cells being formed in a matrix;
at least one of the memory cells including a memory thin film transistor and a switching
thin film transistor,

wherein said memory thin film transistor comprises:

- a first semiconductor active layer over an insulating surface;
- a first insulating film;
- a floating gate electrode;
- a second insulating film;
- a control gate electrode,

wherein said switching thin film transistor including:

- a second semiconductor active layer over the insulating ~~substrate~~ surface;
- a gate insulating film;
- a gate electrode,

wherein the first semiconductor active layer of the memory thin film transistor and the
second semiconductor active layer are in a common semiconductor island,

wherein a first thickness of the first semiconductor active layer of the memory thin
film transistor is thinner than a second thickness of the second semiconductor active layer of
the switching thin film transistor,

wherein the floating gate electrode comprises one of tantalum and tantalum alloy, and

wherein the second insulating film comprises a thermal oxide film of the floating gate
electrode.

2-74. (Cancelled)

75. (Previously Presented) A semiconductor device comprising:

- a substrate;
- a non-volatile memory over the substrate;
- a pixel portion over the substrate;

a source wiring driver circuit for driving the pixel portion over the substrate;
a gate wiring driver circuit for driving the pixel portion over the substrate; and
a correction circuit over the substrate.

76. (Previously Presented) A semiconductor device comprising:
a substrate;
a non-volatile memory over the substrate;
a pixel portion;
a source wiring driver circuit for driving the pixel portion over the substrate;
a gate wiring driver circuit for driving the pixel portion over the substrate; and
a memory controller circuit over the substrate for controlling the non-volatile memory circuit.

77. (Previously Presented) A semiconductor device comprising:
a substrate;
a non-volatile memory over the substrate;
a pixel portion over the substrate;
a source wiring driver circuit for driving the pixel portion over the substrate;
a gate wiring driver circuit for driving the pixel portion over the substrate; and
a correction circuit over the substrate,
wherein the non-volatile memory comprises a plurality of memory cells,
wherein at least one of the memory cells comprises:
a memory thin film transistor; and
a switching thin film transistor,
wherein said memory thin film transistor comprises:
a first semiconductor active layer over a first insulating film;
a floating gate electrode;
a second insulating film; and
a control gate electrode,
wherein said switching thin film transistor comprises:
a second semiconductor active layer;

a gate insulating film; and

a gate electrode,

wherein the first semiconductor active layer of the memory thin film transistor and the second semiconductor active layer are in a common semiconductor island.

78. (Previously Presented) A semiconductor device comprising:

a substrate;

a non-volatile memory over the substrate;

a pixel portion;

a source wiring driver circuit for driving the pixel portion over the substrate;

a gate wiring driver circuit for driving the pixel portion over the substrate; and

a memory controller circuit over the substrate for controlling the non-volatile memory circuit,

wherein the non-volatile memory comprises a plurality of memory cells,

wherein at least one of the memory cells comprises:

a memory thin film transistor; and

a switching thin film transistor,

wherein said memory thin film transistor comprises:

a first semiconductor active layer over a first insulating film;

a floating gate electrode;

a second insulating film; and

a control gate electrode,

wherein said switching thin film transistor comprises:

a second semiconductor active layer;

a gate insulating film; and

a gate electrode,

wherein the first semiconductor active layer of the memory thin film transistor and the second semiconductor active layer are in a common semiconductor island.

79. (Previously Presented) A semiconductor device comprising:

a substrate;

a non-volatile memory over the substrate;
a pixel portion over the substrate;
a source wiring driver circuit for driving the pixel portion over the substrate;
a gate wiring driver circuit for driving the pixel portion over the substrate; and
a correction circuit over the substrate,
wherein the non-volatile memory comprises a plurality of memory cells,
wherein at least one of the memory cells comprises:

- a memory thin film transistor; and
- a switching thin film transistor,

wherein said memory thin film transistor comprises:

- a first semiconductor active layer over a first insulating film;
- a floating gate electrode;
- a second insulating film; and
- a control gate electrode,

wherein said switching thin film transistor comprises:

- a second semiconductor active layer;
- a gate insulating film; and
- a gate electrode,

wherein the first semiconductor active layer of the memory thin film transistor and the second semiconductor active layer are in a common semiconductor island,

wherein a first thickness of the first semiconductor active layer of the memory thin film transistor is thinner than a second thickness of the second semiconductor active layer of the switching thin film transistor.

80. (Previously Presented) A semiconductor device comprising:

- a substrate;
- a non-volatile memory over the substrate;
- a pixel portion;
- a source wiring driver circuit for driving the pixel portion over the substrate;
- a gate wiring driver circuit for driving the pixel portion over the substrate; and
- a memory controller circuit over the substrate for controlling the non-volatile memory

circuit,

wherein the non-volatile memory comprises a plurality of memory cells,

wherein at least one of the memory cells comprises:

a memory thin film transistor; and

a switching thin film transistor,

wherein said memory thin film transistor comprises:

a first semiconductor active layer over a first insulating film;

a floating gate electrode;

a second insulating film; and

a control gate electrode,

wherein said switching thin film transistor comprises:

a second semiconductor active layer;

a gate insulating film; and

a gate electrode,

wherein the first semiconductor active layer of the memory thin film transistor and the second semiconductor active layer are in a common semiconductor island, and

wherein a first thickness of the first semiconductor active layer of the memory thin film transistor is thinner than a second thickness of the second semiconductor active layer of the switching thin film transistor.

81. (Previously Presented) A semiconductor device according to claim 77,
wherein the floating gate electrode comprises one of tantalum and tantalum alloy, and
wherein the second insulating film comprises a thermal oxide film of the floating gate electrode.

82. (Previously Presented) A semiconductor device according to claim 78,
wherein the floating gate electrode comprises one of tantalum and tantalum alloy, and
wherein the second insulating film comprises a thermal oxide film of the floating gate electrode.

83. (Previously Presented) A semiconductor device according to claim 79, wherein the floating gate electrode comprises one of tantalum and tantalum alloy, and wherein the second insulating film comprises a thermal oxide film of the floating gate electrode.

84. (Previously Presented) A semiconductor device according to claim 80, wherein the floating gate electrode comprises one of tantalum and tantalum alloy, and wherein the second insulating film comprises a thermal oxide film of the floating gate electrode.

85. (Previously Presented) A device according to claim 75, wherein the semiconductor device is one selected from the group consisting of a liquid crystal display device and an EL display device.

86. (Previously Presented) A device according to claim 76, wherein the semiconductor device is one selected from the group consisting of a liquid crystal display device and an EL display device.

87. (Previously Presented) A device according to claim 77, wherein the semiconductor device is one selected from the group consisting of a liquid crystal display device and an EL display device.

88. (Previously Presented) A device according to claim 78, wherein the semiconductor device is one selected from the group consisting of a liquid crystal display device and an EL display device.

89. (Previously Presented) A device according to claim 79,
wherein the semiconductor device is one selected from the group consisting of a
liquid crystal display device and an EL display device.

90. (Previously Presented) A device according to claim 80,
wherein the semiconductor device is one selected from the group consisting of a
liquid crystal display device and an EL display device.

91. (Previously Presented) A device according to claim 75,
wherein the semiconductor device is one selected from the group consisting of a display,
a video camera, a head-mounted type display, a DVD display, a goggle type display, a personal
computer, a portable telephone, and a car audio.

92. (Previously Presented) A device according to claim 76,
wherein the semiconductor device is one selected from the group consisting of a display,
a video camera, a head-mounted type display, a DVD display, a goggle type display, a personal
computer, a portable telephone, and a car audio.

93. (Previously Presented) A device according to claim 77,
wherein the semiconductor device is one selected from the group consisting of a display,
a video camera, a head-mounted type display, a DVD display, a goggle type display, a personal
computer, a portable telephone, and a car audio.

94. (Previously Presented) A device according to claim 78,
wherein the semiconductor device is one selected from the group consisting of a display,
a video camera, a head-mounted type display, a DVD display, a goggle type display, a personal
computer, a portable telephone, and a car audio.

95. (Previously Presented) A device according to claim 79,
wherein the semiconductor device is one selected from the group consisting of a display, a video camera, a head-mounted type display, a DVD display, a goggle type display, a personal computer, a portable telephone, and a car audio.

96. (Previously Presented) A device according to claim 80,
wherein the semiconductor device is one selected from the group consisting of a display, a video camera, a head-mounted type display, a DVD display, a goggle type display, a personal computer, a portable telephone, and a car audio.

97. (New) A nonvolatile memory according to claim 1, wherein the first and the second semiconductor active layers contain amorphous silicon germanium.

98. (New) A device according to claim 77, wherein the first and the second semiconductor active layers contain amorphous silicon germanium.

99. (New) A device according to claim 78, wherein the first and the second semiconductor active layers contain amorphous silicon germanium.

100. (New) A device according to claim 79, wherein the first and the second semiconductor active layers contain amorphous silicon germanium.

101. (New) A device according to claim 80, wherein the first and the second semiconductor active layers contain amorphous silicon germanium.